

REMARKS

As a preliminary matter, Applicants appreciate the Examiner's indication that Claims 13 and 14 have been allowed.

Claims 9-12 stand rejected under 35 U.S.C. §103 as being unpatentable over United States Patent No. 5,567,042 to Farchmin et al. in view of JP 2000-10095 to Takahashi et al. (JP '095) and further in view of JP 5-59402 (JP '402). Applicants have cancelled dependent Claim 12, without prejudice, thereby rendering this rejection moot with respect to this claim. However, with respect to Claims 9-11, Applicants respectfully traverse this rejection.

Applicants respectfully submit that the cited references fail to disclose or suggest all of the features of the claimed invention. More specifically, the cited references, alone or in combination, fail to disclose or suggest a lighting unit that includes, *inter alia*, a reflector with a reflective surface "wherein the reflective surface includes at least three adjacent concaved curve segments, with each of the adjacent concaved curve segments having a curvature center and a constant radius, with the constant radius of at least one of the concaved curve segments being different from the constant radius of at least one other concaved curve segment," as now recited in amended independent Claim 9.

One example of an embodiment defined by Claim 9 is shown in Applicants' Figure 7, which includes reflector 10 and cold cathode tubes 2 and 4. In this embodiment, the reflector 10 has a reflective surface that includes adjacent concaved curve segments, such as C1, C2, C3 and C4, with each of the adjacent concaved curve segments having a curvature center and a constant radius. Further, in this embodiment, concaved curved surface C1 is of a different constant radius

(such as 3.2 mm) than the constant radius of concaved curve segment C2 (which has a radius of 4.0 mm).

In contrast, none of the cited references disclose or suggest the reflective surface configuration defined in independent Claim 9. More specifically, reflective surface 50 of Farchmin et al. does not include at least three adjacent concaved curve segments with each segment having a curvature center and constant radius. For example, Figure 5 of Farchmin et al. shows a plurality of curved surfaces A1-A5 and B1-B5. However, as described in column 3, lines 44-60 of Farchmin et al., surface A4 is parabolic and surfaces A5, B4 and B5 are hyperbolic, and thus none of these surfaces have a constant radius. Further, although surfaces A2 and A3 may be considered as each having a constant radius, there are only *two* constant radius surfaces that are adjacent to each other, and not "at least three adjacent" surfaces, as now defined in Claim 9. Further, it would not have been obvious to have added a third constant radius surface that would be adjacent to surfaces A2 and A3 (or surfaces B2 and B3) because to do so would destroy the function of adjacent surfaces A4 and A5, which are required to obtain the desired reflection pattern disclosed in Farchmin et al.

This deficiency is not remedied by JP '095 or JP '402 either. More specifically, component 7 of Figures 1-4 of JP '095 fails to include any concaved curve surfaces that are adjacent to any other concaved curve surfaces. Neither Figure 1 nor Figure 2 of JP '402 appear to include the claimed "at least three adjacent concaved curve segments, with each of the adjacent concaved curve segments having a curvature center and a constant radius," as recited in Claim 9. Accordingly, as all of the features of independent Claim 9 are not disclosed or suggested in the

cited references, Applicants respectfully request the withdrawal of this §103 rejection of independent Claim 9 and associated dependent Claims 10 and 11.

Claims 15 and 55 stand rejected under 35 U.S.C. §103 as being unpatentable over JP 10-1091079 (JP '079) in view of United States Patent No. 2,530,204 to Levy. Applicants respectfully traverse this rejection.

Applicants respectfully submit that the cited references fail to disclose or suggest all of the claimed features of the present invention of independent Claim 15. More specifically, neither JP '079 nor the Levy reference, alone or in combination, disclose or suggest a lighting unit in which "the phosphor is dispersed throughout between inner and outer surfaces of the wall of the tube" (emphasis added), as now defined in amended independent Claim 15. This feature is disclosed in the present Specification on page 55 (lines 27-28) and in Figure 10.

The lighting unit defined in independent Claim 15 can obtain the specific technical effect that the substantial diameter of the cold-cathode ray tubes can be smaller than the outer diameter of the glass tubes because the local light-scattering ability of the glass tubes is low.

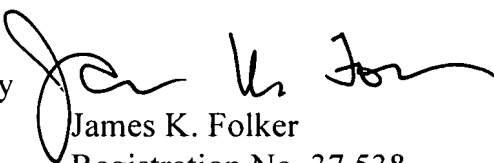
As correctly acknowledged by the Examiner, JP '079 does not disclose a cold-cathode tube. Accordingly, the Examiner relied upon the Levy reference for this feature. However, the Levy reference discloses that the luminescent material 3 is only formed on the interior surface of the outer glass wall 2a, and that the translucent photoemissive material 4 is only formed on the exterior surface of the inner wall 2b (which exterior surface is still within outer wall 2a). *See* Levy, col. 2, lines 1-13 and Figures 1 and 2. However, the Levy reference fails to disclose or suggest that the phosphor is dispersed throughout the area between the inner and outer

surfaces of any of the walls 2a and 2b and the lamp envelope 2. Accordingly, as all of the features defined in independent Claim 15 are not disclosed or suggested in the cited references, Applicants respectfully request the withdrawal of this §103 rejection of independent Claim 15 and associated dependent Claim 55.

Claim 16 *appears* to stand rejected under 35 U.S.C. §103 as being unpatentable over JP '079 in view of United States Patent No. 4,487,48 to Suzawa and further in view of JP 9-282918. Applicants have cancelled Claim 16, without prejudice, thereby rendering this rejection moot.

For all of the above reasons, Applicants request reconsideration and allowance of the claimed invention. Should the Examiner be of the opinion that a telephone conference would aid in the prosecution of the application, or that outstanding issues exist, the Examiner is invited to contact the undersigned attorney.

Respectfully submitted,
GREER, BURNS & CRAIN, LTD.

By 
James K. Folker
Registration No. 37,538

November 28, 2007
Suite 2500
300 South Wacker Drive
Chicago, Illinois 60606
(312) 360-0080

Customer No. 24978
P:\DOCS\1324\68392\C92586.DOC